



UNITED STATES PATENT AND TRADEMARK OFFICE

57
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,389	11/14/2001	Makoto Itonaga	24828	7016
20529	7590	04/21/2005	EXAMINER	
NATH & ASSOCIATES 1030 15th STREET, NW 6TH FLOOR WASHINGTON, DC 20005			AGUSTIN, PETER VINCENT	
			ART UNIT	PAPER NUMBER
			2652	

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/987,389	ITONAGA ET AL.
	Examiner	Art Unit
	Peter Vincent Agustin	2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 15 February 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-8 is/are pending in the application.
 - 4a) Of the above claim(s) 1-7 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 8 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 15, 2005 has been entered.

Claim Rejections - 35 USC § 103

2. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ota et al. (US 6,411,442) in view of Kasami et al. (JP 411120594 A), Tanaka et al. (US 4,927,247) and the Applicant's admitted prior art.

In regard to claim 8, Ota et al. disclose an objective lens (e.g., Figure 1a) for an optical disk including a transmission layer, comprising: a single lens having a first surface (left curved surface) on a light source side and a second surface (right surface) on an optical disk side and at least one of the first and second surfaces formed in an aspheric shape, having a numerical aperture of 0.78 or more (column 2, lines 6-11), converging a light, which is emitted by a light source and enters the first surface, at a focal point outside the lens (as shown by the light beam on Figure 1a), and satisfying the following condition:

$d_1/f > 1.2$ (see inequality in column 2, line 21);

$0.65 < R_1/f < 0.95$ (see inequalities in column 2, lines 37 & 47);

$|R_1/R_2| < 0.7$ (Figure 1a shows the curvature radius R_2 of the second surface close to infinity, i.e., the expression R_1/R_2 approaches zero); and

$n > 1.65$ (see inequalities in column 2, lines 37 & 43), in which f denotes a focal distance of the lens (column 2, lines 23-24), d_1 denotes a center thickness of the lens (column 2, lines 23-24), $R1$ denotes a curvature radius in a vertex of the first surface, $R2$ denotes a curvature radius in a vertex of the second surface, and n denotes a refractive index of the lens (column 2, line 39); and having a wavefront aberration of 0.04λ or less (see column 18, Table 1, Examples 1-15, which all teach a wavefront aberration less than 0.04λ). However, in regard to claim 8, Ota et al. does not explicitly disclose that: the transmission layer has a thickness of 0.3 mm or less; the objective lens has a working distance of 0.3 mm or more; and the objective lens has a wavefront aberration of 0.04λ or less when the first surface and the second surface are not co-axial by $5 \mu\text{m}$.

Kasami et al. (see solution) disclose an optical disk having a transmission layer of thickness 0.3 mm or below. It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to have used the optical disk having a transmission layer of thickness 0.3 mm or below of Kasami et al. in conjunction with the objective lens of Ota et al., the motivation being to provide accurate initialization of the optical disc (see first line of problem to be solved and last line of solution), thereby enabling accurate data reproduction and recording.

Tanaka et al. disclose a working distance of at least 0.4 mm or more between an objective lens and a substrate of a disc in order to prevent collision (column 4, lines 43-53). It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to have used an operation distance of 0.3 mm or more between the objective lens and disc of Ota et

al. as suggested by Tanaka et al., the motivation being to prevent collision, thereby preventing damage to the objective lens and the disc.

The Applicant's admitted prior art discloses an objective lens having a wavefront aberration of 0.04λ or less when a first surface and a second surface of a lens are not co-axial by $5 \mu\text{m}$ (see last paragraph of page of the original specification). It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to have provided the objective lens of Ota et al. with a wavefront aberration of 0.04λ or less when the first surface and the second surface are not co-axial by $5 \mu\text{m}$ as suggested by the Applicant's admitted prior art, the motivation being to compensate for axis deviation, thereby preventing reproduction/recording errors.

Response to Arguments

3. The Applicant argues that "the combination of references fails to teach or suggest all the limitations as set forth in independent claim 8" (page 7, paragraph 2) because the Examiner's statement that "Table 1, Example 5 in Ota et al. teaches a wavefront aberration of 0.04λ or less when a first surface and a second surface are not co-axial by $5 \mu\text{m}$ as recited in claim 8" is allegedly not accurate (page 7, paragraph 5). The Examiner disagrees. The last two lines of the previous version of claim 8 recite "a first surface" and "a second surface" (without antecedent basis from the "at least one surface" on line 2), leading the Examiner to interpret these limitations as **any surface** of Ota et al. that would cause the 0.005 mm Axial Off-axis shown in Table 1, Example 5.

However, the above argument is now moot. In light of the Applicant's amendment filed February 15, 2005, the previous 103(a) rejection over Ota et al. in view of Kasami et al. &

Tanaka et al. is withdrawn; however, upon further consideration, a new ground of rejection (using the same references, and additionally, in further view of the Applicant's admitted prior art) is made to claim 8.

4. The previous 103(a) rejection of claim 8 over Kiriki et al. in view of Kasami et al., Tanaka et al. and the Applicant's admitted prior art has been withdrawn in light of the amendment. In addition, the previous 103(a) rejection of claim 8 over Kiriki et al. in view of Kasami et al., Tanaka et al. and Shimozono et al. has been withdrawn in light of the amendment. Therefore, the Applicant's arguments on pages 9-10 are now moot.

5. In response to Applicant's argument (see page 10, paragraph 4) that the Examiner relies on a large number of references to reject one claim, reliance on a large number of references in a rejection does not, without more, weigh against the obviousness of the claimed invention. See *In re Gorman*, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991). Furthermore, the Applicant's amendments necessitated the use of multiple references. For example, original claim 8 was rejected using a single reference; and the dependent claims 9 & 10 were each rejected using only an additional reference. In the amendment dated August 9, 2004, the Applicant amended claim 8 to incorporate the limitations of claims 9 & 10, which amendment necessitated the combination of all the applied references. Finally, the amendment of February 15, 2005 necessitated a rejection using another reference. One cannot obtain a patent by combining multiple old information or individual teachings of multiple prior art references.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Vincent Agustin whose telephone number is 571-272-7567. The examiner can normally be reached on Monday-Friday 9:30-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Peter Vincent Agustin
Art Unit 2652



BRIAN E. MILLER
PRIMARY EXAMINER